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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	Before the Examiner:
Abbondanzio et al.	:	Tang, Kenneth
Serial No.: 09/981,519	:	Group Art Unit: 2195
Filed.: October 17, 2001	:	
Title.: AUTOMATICALLY SWITCHING	:	IBM Corporation
SHARED REMOTE DEVICES IN A	:	IP Law Dept. YXSA/Bldg. 002
DENSE SERVER ENVIRONMENT	:	3039 Cornwallis Road
THEREBY ALLOWING THE REMOTE	:	P.O. Box 12195
DEVICES TO FUNCTION AS A LOCAL	:	Research Triangle Park, NC 27709
DEVICE	:	

FOURTH APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I. **REAL PARTY IN INTEREST**

The real party in interest is International Business Machines, Inc., which is the assignee of the entire right, title and interest in the above-identified patent application.

II. **RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Appellants, Appellants' legal representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-22 are pending in the Application. Claims 1-22 stand rejected. Claims 1-22 are appealed.

IV. STATUS OF AMENDMENTS

Appellants have not submitted any amendments following receipt of the final rejection with a mailing date of June 16, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 1:

In one embodiment of the present invention, a method for automatically switching remote shared devices in a dense server environment may comprise the step of receiving a request to access a shared device from a server blade. Specification, page 10, line 3 – page 11, line 5; Figure 3, step 301. The method may further comprise issuing a query as to whether the shared device is being accessed. Specification, page 11, lines 6-8; Figure 3, step 302. The method may further comprise receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 12, lines 3-8; Figure 3, step 307. The method may further comprise waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 12, lines 8-18; Figure 3, step 308.

Independent Claim 8:

In another embodiment of the present invention, a computer program product embodied in a machine readable medium for automatically switching remote shared devices in a dense server environment may comprise the programming step of receiving a request to access a shared device from a server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 10, line 3 – page 11, line 5; Figure 1,

element 110; Figure 2, elements 204, 206; Figure 3, step 301. The computer program product may further comprise the programming step of issuing a query as to whether the shared device is being accessed. Specification, page 8, line 4 – page 9, line 26; Specification, page 11, lines 6-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 302. The computer program product may further comprise the programming step of receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 3-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 307. The computer program product may further comprise the programming step of waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 8-18; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 308.

Independent Claim 15:

In another embodiment of the present invention, a system comprising one or more shared devices. Specification, page 7, line 3 – page 8, line 2; Figure 1, element 130. The system may further comprise a plurality of server blades coupled to the one or more shared devices via a service unit, where the service unit is configured to establish a connection between one of the one or more shared devices and one of the plurality of server blades requesting to access the one of the one or more shared devices. Specification, page 7, line 3 – page 8, line 2; Figure 1, elements 110, 120, 130. The requesting server blade may further comprise a processor. Specification, page 8, line 4 – page 9, line 26; Figure 2, element 201. The requesting server blade may further comprise a memory unit coupled to the processor, where the memory unit is operable for storing a program, where the program is operable for performing the programming step of receiving a request to access the requested shared device from the requesting server blade. Specification, page 8, line 4 – page 9, line 26;

Specification, page 10, line 3 – page 11, line 5; Figure 1, element 110; Figure 2, elements 201, 204, 206; Figure 3, step 301. The program may further be operable for performing the programming step of issuing a query as to whether the shared device is being accessed. Specification, page 8, line 4 – page 9, line 26; Specification, page 11, lines 6-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 302. The program may further be operable for performing the programming step of receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 3-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 307. The program may further be operable for performing the programming step of waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 8-18; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 308.

VI. GROUND S OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 1, 8 and 15 stand rejected under 35 U.S.C. §101.
- B. Claim 15 stands rejected under 35 U.S.C. §112, second paragraph.
- C. Claims 1-6, 8-13 and 15-21¹ stand rejected under 35 U.S.C. §102(b) as being anticipated by George et al. (U.S. Patent No. 4,965,718) (hereinafter "George").
- D. Claims 7, 14 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over George in view of Appellants' Background.

¹ Appellants note that on page 3 of the present Office Action (11/15/2006), the Examiner indicates that claim 22 is rejected under 35 U.S.C. §102(b). However, on page 9 of the present Office Action, the Examiner indicates that claim 22 is rejected for the same reasons as claim 7. Hence, Appellants believe that the Examiner meant to reject claim 22 under 35 U.S.C. §103(a) and not under 35 U.S.C. §102(b)

VII. ARGUMENTA. Claims 1, 8 and 15 are improperly rejected under 35 U.S.C. §101.

The Examiner has rejected claims 1, 8 and 15 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Office Action (11/15/2006), page 2. The Examiner asserts that the inventions claimed in claims 1, 8 and 15 do not provide a tangible result. *Id.* Appellants respectfully traverse.

The Congressional intent, is that any new and useful process, machine, manufacture or composition of matter under the sun that is made by man is the proper subject matter of a patent. M.P.E.P. §2106. The subject matter courts have found to be outside the four statutory categories is limited to subject matter that is not a practical application or use of an idea, a law of nature or a natural phenomenon. *See, e.g., Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874); M.P.E.P. §2106. Claim 1 is directed to a method, which is not outside the four statutory categories, for automatically switching remote shared devices in a dense server environment. Claim 8 is directed to a computer program product, which is not outside the four statutory categories, for automatically switching remote shared devices in a dense server environment. Claim 15 is directed to a system, which is not outside the four statutory categories, for automatically switching remote shared devices in a dense server environment.

Appellants respectfully contend that the claimed inventions in claims 1, 8 and 15 satisfy the test for statutory subject matter recited in *In re Alappat*, and repeated in *State Street Bank & Trust Co. v. Signature Financial Group*, and *AT&T Corp. v. Excel Communications, Inc.* *In re Alappat*, 33 F.3d 1526, 31 U.S.P.Q.2d 1545 (Fed. Cir. 1994); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 47 U.S.P.Q.2d 1596 (Fed. Cir. 1998); *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1526, 50 U.S.P.Q.2d 1547 (Fed. Cir. 1999). The claimed inventions

produce a useful, concrete and tangible result in, *inter alia*, automatically switching remote shared devices in a dense server environment.

The essential inquiry under *In re Alappat* is to determine whether the claimed subject matter as a whole is directed to a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea" or if, in contrast, the mathematical concept has been reduced to some practical application rendering it useful. *AT&T Corp.*, 172 F.2d at 1357, 50 U.S.P.Q.2d at 1451 (citing *In re Alappat*, 33 F.3d at 1543, 31 U.S.P.Q.2d at 1556-57). Moreover, in making the determination whether the claimed subject matter as a whole is a disembodied mathematical concept or if the concept has been reduced to some practical application rendering it useful, the claims must be construed in the light of the Specification. *See, AT&T Corp.*, 172 F.3d at 1357, 50 U.S.P.Q.2d at 1451 (stating that more than an abstract idea was claimed in *In re Alappat* because the "claimed invention as whole was directed toward forming a specific machine that produced the useful, concrete and tangible result of a *smooth wave form display*") (emphasis supplied). The single claim at issue in *In re Alappat* was directed to a rasterizer and recited elements in means plus function form. *In re Alappat*, 33 F.3d at 1540, 31 U.S.P.Q.2d at 1555. Additionally, none of the limitations recited in the claim at issue expressly claimed a "smooth wave form display". Indeed, the concrete, useful and tangible result relied upon in *In re Alappat*, namely, a smooth uniform display, appears in the background of the invention. *Kuriappan P. Alappat, et al.*, U.S. Patent No. 5,440,676 (col. 1, lines 9-10).

Likewise, in *AT&T Corp.*, the useful, nonabstract result relied upon in holding that the claimed invention was directed to statutory subject matter was that the PIC indicator therein held information about the call recipients PIC, which facilitated differential billing of long-distance calls made by a subscriber. *AT&T Corp.*, 172 F.3d 1358, 50 U.S.P.Q.2d at 1452. However, the claim at issue in *AT&T Corp.* was directed to a method including the steps of generating a message record for an

interexchange call, and including in the message record a PIC indicator having a value which is a function of whether or not the interexchange carrier associated with the terminating subscriber is a predetermined one of the interexchange carriers. *AT&T Corp.*, 172 F.3d at 1354, 50 U.S.P.Q.2d at 1449. Again, there was no express or explicit claim limitation directed to the useful, concrete, and tangible result relied upon in determining that the aforesaid claim was directed to statutory subject matter. *See, Id.* The relied upon PIC indicator that facilitates differential billing of long-distance calls appears, *inter alia*, in the summary of the invention. *Gerard P. Doherty, et al.*, U.S. Patent No. 5,333,184, col. 1, line 66 through col. 2, line 3.

Likewise, in *State Street Bank & Trust v. Signature Financial Group*, a useful and concrete and tangible result not expressed in an explicit limitation in the claim at issue was relied upon in holding that the claim was directed to statutory subject matter. *See, State Street Bank*, 149 F.3d at 1373, 47 U.S.P.Q.2d at 1601 (holding that the transformation of data by the claimed data processing system produced a useful, concrete and tangible result, namely a final share price momentarily fixed for recording and reporting purposes). The claimed invention recited no limitation directed to either a final share price or means for momentarily fixing the final share price for recording and reporting purposes. *See, State Street Bank*, 149 F.3d at 1371, 47 U.S.P.Q.2d at 1599. Indeed, the relied upon useful, concrete and tangible result in *State Street Bank*, namely a final share price momentarily fixed, is not explicitly recited in the *State Street Bank* patent, but is effectively a distillation of the Summary of the Invention. *See, R. Todd Boes*, U.S. Patent No. 5,193,056, col. 4, lines 36-61. Thus, it is beyond peradventure that when judging the claimed subject matter as a whole to determine patentability under 35 U.S.C. § 101, the claims must be construed in the light of the specification.

In short, the question whether a claim encompasses statutory subject matter focuses on the essential characteristics of the subject matter, in particular its utility. *State Street Bank*, 149 F.3d at 1375, 47 U.S.P.Q.2d at 1602.

The Examiner contends that the cited claims do not produce a useful, tangible result. However, claims 1, 8 and 15 clearly do produce a useful, tangible result, especially when construed in the light of the specification. For example, referring to claim 1, claim 1 is directed to a method for automatically switching remote shared devices in a dense server environment, which includes the steps of: receiving a request to access a shared device from a server blade; and issuing a query as to whether the shared device is being accessed, where if the shared device is not being accessed by the server blade then the method further includes the steps of: receiving a response to the query indicating that the shared device is not available; and waiting to receive a response that the shared device is available. These steps are directed to a useful, tangible result, namely, automatically switching remote shared devices in a dense server environment thereby allowing each remote device to function as a local device as discussed in Appellants' specification. Claims 8 and 15 are similarly directed to a useful, tangible result, namely, automatically switching remote shared devices in a dense server environment thereby allowing each remote device to function as a local device as discussed in Appellants' specification.

As stated above, the inquiry under 35 U.S.C. §101 is whether there is a practical application, or result. *State Street Bank*, 149 F.3d at 1373, 47 U.S.P.Q.2d at 1601. As discussed above, claims 1, 8 and 15 are directed to a method, computer program product and system for automatically switching remote shared devices in a dense server environment thereby allowing each remote device to function as a local device as discussed in Appellants' specification. Hence, the subject matter of claims 1, 8 and 15 has a practical application within the four statutory categories and is not an idea, a law of nature or a natural phenomenon.

Thus, Appellants respectfully contend that claims 1, 8 and 15 constitute statutory subject matter. Appellants respectfully assert that the rejections of claims 1, 8 and 15 under 35 U.S.C. §101 are in error.

B. Claim 15 is improperly rejected under 35 U.S.C. §112, second paragraph.

The Examiner rejects claim 15 under 35 U.S.C. §112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Office Action (11/15/2006), page 3. The Examiner states:

Applicant's Specification defines a server blade to not include a storage unit but rather accesses shared devices. In claim 15, it is claimed that the server blade includes a memory unit that is coupled to the processor. The server blade of the claims contradicts the server blade described in the Specification. Therefore, claim 15 is indefinite. Office Action (11/15/2006), page 3.

Appellants respectfully traverse. Appellants specifically state that a server blade may refer to a typical server that does not include a storage unit (e.g., CD-ROM drive, floppy disk drive). Specification, page 1, lines 12-14. Appellants further state that the storage unit (e.g., CD-ROM drive, floppy disk drive) may be the shared device that each server blade has the ability to access. Specification, page 1, lines 14-15. Appellants further state that a server blade may include a memory unit (e.g., RAM 206) where the software components, including operating system 203 and application 204 may be loaded into RAM 206. Specification, page 8, lines 23-25. Appellants have never indicated that a server blade does not include a memory unit. Instead, Appellants have indicated that a server blade may not include a storage unit, such as a CD-ROM drive or a floppy disk drive. The Examiner's assertion that Appellants specified that a server blade does not include a memory unit is not supported by Appellants' Specification. Appellants kindly direct the Board's attention to Figure 2, and the description thereof, which describes an embodiment of a server blade which clearly shows a server blade having a memory unit. Hence, the server blade as claimed in claim 15 is not contradictory to the description of a server blade in Appellants' Specification. Accordingly, claim 15 does particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Hence,

the Examiner's rejection of claim 15 under 35 U.S.C. §112, second paragraph, is in error.

- C. Claims 1-6, 8-13 and 15-21 are not properly rejected under 35 U.S.C. §102(b) as being anticipated by George.

The Examiner has rejected claims 1-6, 8-13 and 15-21 under 35 U.S.C. §102(b) as being anticipated by George. Office Action (11/15/2006), page 3. Appellants respectfully traverse these rejections for at least the reasons stated below.

For a claim to be anticipated under 35 U.S.C. §102, each and every claim limitation must be found within the cited prior art reference and arranged as required by the claim. M.P.E.P. §2131.

1. Claims 1, 8 and 15 are not anticipated by George.

Appellants respectfully assert that George does not disclose "receiving a request to access a shared device from a server blade" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites element 14-1 of George as disclosing a shared device and further cites element 12-1 of George as disclosing a server blade. Office Action (11/15/2006), page 3. The Examiner further cites column 5, lines 1-32 and the Abstract of George as disclosing the above-cited claim limitation. *Id.* Appellants respectfully traverse.

George instead discloses a plurality of processing elements (PE), indicated at 12-1 through 12-N, connected to a plurality of memory elements (ME), indicated at 14-1 through 14-M through an interconnection network 16. Column 6, lines 34-37. The Examiner must provide a basis in fact and/or technical reasoning to support the assertion that processing element 12-1 of George discloses a server blade and that memory element 14-1 of George discloses a shared device. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that processing element 12-1 of

George discloses a server blade and that memory element 14-1 of George discloses a shared device, and that it would be so recognized by persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of anticipation for rejecting claims 1, 8 and 15. M.P.E.P. §2131.

Further, the Examiner has failed to explain how processing element 12-1 of George discloses a server blade and how memory element 14-1 of George discloses a shared device. The pending claims must be given their broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 U.S.P.Q.2d 1664, 1667 (Fed. Cir. 2000); M.P.E.P. §2111. The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. §2111. Since the Examiner has not provided a reasonable interpretation consistent with the specification or consistent with the interpretation that those skilled in the art would reach, the Examiner has not presented a *prima facie* case of anticipation for rejecting claims 1, 8 and 15. M.P.E.P. §2111.

Further, George instead discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. There is no language in the cited passages that discloses receiving a request. Neither is there any language in the cited passages that discloses receiving a request to access a shared device. Neither is there any language in the cited passages that discloses receiving a request to access a shared device from a server blade. Thus, George does not disclose all of the limitations of claims 1, 8 and 15, and thus George does not anticipate claims 1, 8 and 15. M.P.E.P. §2131.

Appellants further assert that George does not disclose "issuing a query as to whether said shared device is being accessed" as recited in claim 1 and similarly in claims 8 and 15. The Examiner had previously cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites column 5, lines 1-32 and the Abstract of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 4. Appellants respectfully traverse.

George instead discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. There is no language in the cited passages that discloses issuing a query as to whether memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed. Thus, George does not disclose all of the limitations of claims 1, 8 and 15, and thus George does not anticipate claims 1, 8 and 15. M.P.E.P. §2131.

Appellants further assert that George does not disclose "wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of: receiving a response to said query indicating that said shared device is not available" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites elements 12 and 610 of George as well as the Abstract and column 12, lines 12-21 of George as disclosing the above-cited claim limitations. Office Action (11/15/2006), page 4. Appellants respectfully traverse.

George instead discloses a DATA_READ value, comprising the actual contents of the selected location in memory element 14, is always returned to the requesting microprocessing element 12, which must make its own comparison

between the expected (i.e., comparison) value and the returned value to determine if a match has occurred. Column 12, lines 4-10. George further discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task. Column 12, lines 13-15. Furthermore, George discloses that as an alternative to returning the contents of the memory location to the requesting processing element 12, the comparison with the comparison value can be done in memory element 14, and a compare/no compare signal returned to the requesting processing element 12. Column 12, lines 16-21. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Abstract. Hence, George discloses that the requesting processing element 12 compares the read value with the expected value and determines if they match and processing should continue. George additionally discloses that if there is not a match, then processing can wait or be switched to an alternate task. Further, George discloses that a compare/no compare signal may be returned to the requesting processing element 12.

There is no language in the cited passages that discloses receiving a response to the query indicating that the shared device is not available. Neither is there any language in the cited passages that discloses receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Thus, George does not disclose all of the limitations of claims 1, 8 and 15, and thus George does not anticipate claims 1, 8 and 15. M.P.E.P. §2131.

Appellants further assert that George does not disclose "wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of: waiting to receive a response that said shared device is available" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites element 610

as well as the Abstract and column 5, lines 1-32 of George as disclosing the above-cited claim limitations. Office Action (11/15/2006), page 4. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract.

There is no language in the cited passages that discloses waiting to receive a response that the shared device is available. Neither is there any language in the cited passages that discloses waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Thus, George does not disclose all of the limitations of claims 1, 8 and 15, and thus George does not anticipate claims 1, 8 and 15. M.P.E.P. §2131.

Appellants further assert that George does not disclose "one or more shared devices; and a plurality of server blades coupled to said one or more shared devices via a service unit" as recited in claim 15. The Examiner cites elements 14-1...14-N as well as the Abstract and column 5, lines 1-32 of George as disclosing one or more shared device. Office Action (11/15/2006), page 6. The Examiner further cites elements 12-1 of George as disclosing a plurality of server blades. *Id.* Appellants respectfully traverse.

George instead discloses a plurality of processing elements (PE), indicated at 12-1 through 12-N, connected to a plurality of memory elements (ME), indicated at 14-1 through 14-M through an interconnection network 16. Column 6, lines 34-37. The Examiner must provide a basis in fact and/or technical reasoning to support the assertion that processing elements 12-1...12-N of George disclose a plurality of server blades and that memory elements 14-1...14-N of George disclose one or more shared devices. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that processing elements 12-1...12-N of George disclose a plurality of server blades and that memory elements 14-1...14-N of George disclose one or more shared devices, and that it would be so recognized by persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Since the Examiner has not provided any such objective evidence, the Examiner has not presented a *prima facie* case of anticipation for rejecting claims 1, 8 and 15. M.P.E.P. §2131.

Further, the Examiner has failed to explain how processing elements 12-1...12-N of George disclose a plurality of server blades and how memory elements 14-1...14-N of George disclose one or more shared devices. The pending claims must be given their broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 U.S.P.Q.2d 1664, 1667 (Fed. Cir. 2000); M.P.E.P. §2111. The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. §2111. Since the Examiner has not provided a reasonable interpretation consistent with the specification or consistent with the interpretation that those skilled in the art would reach, the Examiner has not presented a *prima facie* case of anticipation for rejecting claims 1, 8 and 15. M.P.E.P. §2111.

2. Claims 2-6 are not anticipated by George for at least the reasons that claim 1 is not anticipated by George.

Claims 2-6 depend from independent claim 1, and hence claims 2-6 are not anticipated by George for at least the above-stated reasons that claim 1 is not anticipated by George.

3. Claims 9-13 are not anticipated by George for at least the reasons that claim 8 is not anticipated by George.

Claims 9-13 depend from independent claim 8, and hence claims 9-13 are not anticipated by George for at least the above-stated reasons that claim 8 is not anticipated by George.

4. Claims 16-21 are not anticipated by George for at least the reasons that claim 15 is not anticipated by George.

Claims 16-21 depend from independent claim 15, and hence claims 16-21 are not anticipated by George for at least the above-stated reasons that claim 15 is not anticipated by George.

5. Claims 2 and 9 are not anticipated by George.

Appellants respectfully assert that George does not disclose "determining if said shared device is being accessed" as recited in claim 2 and similarly in claim 9. The Examiner had previously cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610, the Abstract, and column 12, lines 12-21 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 4. Appellants respectfully traverse.

George instead discloses a DATA_READ value, comprising the actual contents of the selected location in memory element 14, is always returned to the requesting microprocessing element 12, which must make its own comparison between the expected (i.e., comparison) value and the returned value to determine if a match has occurred. Column 12, lines 4-10. George further discloses that the requesting processing element compares the read value with the expected value and

determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Furthermore, George discloses that as an alternative to returning the contents of the memory location to the requesting processing element 12, the comparison with the comparison value can be done in memory element 14, and a compare/no compare signal returned to the requesting processing element 12. Column 12, lines 16-21. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Abstract. Hence, George discloses that the requesting processing element 12 compares the read value with the expected value and determines if they match and processing should continue. George additionally discloses that if there is not a match, then processing can wait or be switched to an alternate task. Further, George discloses that a compare/no compare signal may be returned to the requesting processing element 12.

There is no language in the cited passages that discloses determining if memory element 14-1 (Examiner asserts that memory element 14-1 of George discloses a shared device) is being accessed. There is no language in the cited passages that supports the assertion that the compare/no compare signal indicates if memory element 14-1 is being accessed. Thus, George does not disclose all of the limitations of claims 2 and 9, and thus claims 2 and 9 are not anticipated by George. M.P.E.P. §2131.

6. Claims 3 and 10 are not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said shared device is not being accessed then the method further comprises the steps of: connecting said shared device with said server blade; and transferring said request to access said shared device to said shared device" as recited in claim 3 and similarly in claim 10. The Examiner had previously cited element 12-1 of George as disclosing a

server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 5. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses connecting memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) if memory element 14-1 is not being accessed. There is no

discussion in George of determining if memory element 14-1 is being accessed. Instead, the cited passages disclose generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Neither is there any language in the cited passages that discloses transferring the request to access memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to memory element 14-1. Neither is there any language in the cited passages that discloses transferring the request to access memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to memory element 14-1 if memory element 14-1 is not being accessed. Thus, George does not disclose all of the limitations of claims 3 and 10, and thus claims 3 and 10 are not anticipated by George. M.P.E.P. §2131.

Appellants further traverses the Examiner's statement that George discloses "transmitting after receiving an ACCEPTED signal." Office Action (11/15/2006), page 5. Instead, George discloses that an ACCEPTED signal is generated which indicates that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. Hence, it appears that data has already been transmitted from memory element 14 to processing element 12 (data requested by processing element 12) prior to the generation of the ACCEPTED signal and that there is no subsequent transmission after receiving an ACCEPTED signal.

7. Claims 4 and 11 are not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said shared device is being accessed then the method further comprises the step of: determining if said shared device is being accessed by said server blade" as recited in claim 4 and similarly in claim 11. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George

as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 5. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses determining if memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed by processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade. Neither is there any language in the cited passages that discloses determining if memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed by processing element 12-1 if memory element 14-1 is being accessed. Thus, George does not

disclose all of the limitations of claims 4 and 11, and thus claims 4 and 11 are not anticipated by George. M.P.E.P. §2131.

8. Claims 5 and 12 are not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said shared device is being accessed by said server blade then the method further comprises the steps of: connecting said shared device with said server blade; and transferring said request to access said shared device to said shared device" as recited in claim 5 and similarly in claim 12. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 5. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a

VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses connecting memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) if memory element 14-1 is being accessed by processing element 12-1. Neither is there any language in the cited passages that discloses transferring the request to access memory element 14-1 to memory element 14-1. Neither is there any language in the cited passages that discloses transferring the request to access memory element 14-1 to memory element 14-1 if memory element 14-1 is being accessed by processing element 12-1. Thus, George does not disclose all of the limitations of claims 5 and 12, and thus claims 5 and 12 are not anticipated by George. M.P.E.P. §2131.

9. Claims 6 and 13 are not anticipated by George.

Appellants respectfully assert that George does not disclose "receiving said response that said shared device is available; connecting said shared device with said server blade; and transferring said request to access said shared device to said shared device" as recited in claim 6 and similarly in claim 13. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 5. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing

should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses receiving a response that memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is available. Neither is there any language in the cited passages that discloses connecting memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade). Neither is there any language in the cited passages that discloses transferring the request to access memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to memory element 14-1. Thus, George does not disclose all of the limitations of claims 6 and 13, and thus claims 6 and 13 are not anticipated by George. M.P.E.P. §2131.

10. Claim 16 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein said service unit comprises: a processor; and a memory unit coupled to said processor, wherein said memory unit is operable for storing a computer program, wherein the computer program is operable for performing the following programming step: determining if said requested shared device is being accessed" as recited in claim 16. The Examiner cites the Abstract; column 5, lines 1-32 and column 6, line 51 – column 7, line 15 of George as disclosing the above-cited claim limitations. Office Action (11/15/2006), page 7. Appellants respectfully traverse.

George instead discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. George further discloses that in the operation of processing element 12, control logic 24 functions to control computing engine 18 in accordance with directives stored in memory including local memory 46A. Column 7, lines 6-9.

There is no language in the cited passages that discloses a service unit. The Examiner has not specifically identified an element in George as allegedly disclosing a service unit. Appellants respectfully request the Examiner to particularly point out which element in George discloses a service unit pursuant to 37 C.F.R. §1.104(c)(2). Neither is there any language in the cited passages that discloses a service unit that includes a processor. Neither is there any language in the cited passages that discloses a service unit that includes a memory unit coupled to the processor, where the memory unit is operable for storing a computer program. Neither is there any language in the cited passages that discloses a service unit that includes a memory unit coupled to the processor, where the memory unit is operable for storing a

computer program, where the computer program is operable for performing the programming step of determining if the requested shared device (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed. Thus, George does not disclose all of the limitations of claim 16, and thus claim 16 is not anticipated by George. M.P.E.P. §2131.

11. Claim 17 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said requested shared device is not being accessed then the computer program of said service unit is further operable for performing the following programming step: connecting said requested shared device with said requesting server blade; wherein if said requested shared device is not being accessed then the program of said requesting server blade is further operable for performing the following programming step: transferring said request to access said requested shared device to said requested shared device" as recited in claim 17. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitations. Office Action (11/15/2006), page 8. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing

elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses a service unit. The Examiner has not specifically identified an element in George as allegedly disclosing a service unit. Appellants respectfully request the Examiner to particularly point out which element in George discloses a service unit pursuant to 37 C.F.R. §1.104(c)(2). Neither is there any language in the cited passages that discloses that the computer program of the service unit is operable for connecting the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade). Neither is there any language in the cited passages that discloses that the computer program of the service unit is operable for connecting the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) if the requested memory element 14-1 is not being accessed. Neither is there any language in the cited passages that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for transferring the request to access the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to the requested memory

element 14-1. Neither is there any language in the cited passages that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for transferring the request to access the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to the requested memory element 14-1 if the requested memory element 14-1 is not being accessed. Thus, George does not disclose all of the limitations of claim 17, and thus claim 17 is not anticipated by George. M.P.E.P. §2131.

12. Claim 18 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said requested shared device is being accessed then the computer program of said service unit is further operable for performing the following programming step: determining if said requested shared device is being accessed by said requesting server blade" as recited in claim 18. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 8. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing

elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses a service unit. The Examiner has not specifically identified an element in George as allegedly disclosing a service unit. Appellants respectfully request the Examiner to particularly point out which element in George discloses a service unit pursuant to 37 C.F.R. §1.104(c)(2). Neither is there any language in the cited passages that discloses that the computer program of the service unit is operable for determining if the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed by the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade.). Neither is there any language in the cited passages that discloses that the computer program of the service unit is operable for determining if the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is being accessed by the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) if the requested memory element 14-1 is being accessed. Thus, George does not disclose all of the limitations of claim 18, and thus claim 18 is not anticipated by George. M.P.E.P. §2131.

13. Claim 19 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein if said requested shared device is being accessed by said requesting server blade then the computer program of said service unit is further operable for performing the following programming step: connecting said requested shared device with said requesting server blade; wherein if said requested shared device is being accessed by said requesting server blade then the program of said requesting server blade is further operable for performing the following programming step: transferring said request to access said requested shared device to said requested shared device" as recited in claim 19. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 8. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a

VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses a service unit. The Examiner has not specifically identified an element in George as allegedly disclosing a service unit. Appellants respectfully request the Examiner to particularly point out which element in George discloses a service unit pursuant to 37 C.F.R. §1.104(c)(2). Neither is there any language in the cited passages that discloses that the computer program of the server blade is operable for connecting the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade). Neither is there any language in the cited passages that discloses that the computer program of the server blade is operable for connecting the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) if the requested memory element 14-1 is being accessed by the requesting processing element 12-1. Neither is there any language in the cited passages that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for transferring the request to access the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to memory element 14-1. Neither is there any language in the cited passages that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for transferring the request to access the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to memory element 14-1 if the requested memory element 14-1 is being accessed by the requesting processing element 12-1. Thus, George does not disclose all of the

limitations of claim 19, and thus claim 19 is not anticipated by George. M.P.E.P. §2131.

14. Claim 20 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein the program of said requesting server blade is further operable for performing the following programming step: receiving said response that said requested shared devices is available" as recited in claim 20. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 9. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of

muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for receiving the response that the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) is available. Thus, George does not disclose all of the limitations of claim 20, and thus claim 20 is not anticipated by George. M.P.E.P. §2131.

15. Claim 21 is not anticipated by George.

Appellants respectfully assert that George does not disclose "wherein the computer program of said service unit is further operable for performing the following programming step: connecting said requested shared device with said requesting server blade; wherein the program of said requesting server blade is further operable for performing the following programming step: transferring said request to access said requested shared device to said requested shard device" as recited in claim 21. The Examiner had previously cited element 12-1 of George as disclosing a server blade and cited element 14-1 of George as disclosing a shared device. Office Action (11/15/2006), page 3. The Examiner further cites element 610; the Abstract; column 5, lines 1-32; column 6, lines 60-65 and column 8, lines 22-43 of George as disclosing the above-cited claim limitation. Office Action (11/15/2006), page 9. Appellants respectfully traverse.

George instead discloses that the requesting processing element compares the read value with the expected value and determines if they match and processing should continue. Column 12, lines 10-13. George additionally discloses that if no match is found, processing can wait or be switched to an alternate task (step 610 of Figure 6C). Column 12, lines 13-15. Additionally, George discloses a method and

apparatus for communicating data between multiple tasks in a processing system through the use of a directive operative in a memory element to monitor the status of a semaphore. Column 5, lines 6-9. George further discloses a plurality of processing elements interconnected with each other and with at least one memory element by an interconnection means. Column 5, lines 12-14; Abstract. Additionally, George discloses an interface 22 is connected to memory mapping controller 20 for providing a logical interface with interconnection network 16. Column 6, lines 63-65. Furthermore, George discloses an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted. Column 8, lines 27-29. George further discloses that control logic 52 generates two control signals for transmission to processing elements 12 external to memory element 14: a clear to send CTS signal, indicating that the memory is free to accept a request, and a VALID_OUT signal indicating that valid data is being transmitted at the outputs of muxs 38 and 40. Column 8, lines 33-38. Hence, George discloses generating an ACCEPTED signal indicating that data transmitted from memory element 14 to a processing element has been accepted.

There is no language in the cited passages that discloses a service unit. The Examiner has not specifically identified an element in George as allegedly disclosing a service unit. Appellants respectfully request the Examiner to particularly point out which element in George discloses a service unit pursuant to 37 C.F.R. §1.104(c)(2). Neither is there any language in the cited passages that discloses that the program of the service unit is operable for connecting the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) with the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade). Neither is there any language in the cited passage that discloses that the program of the requesting processing element 12-1 (Examiner asserts that processing element 12-1 discloses a server blade) is operable for transferring the request to access the requested memory element 14-1 (Examiner asserts that memory element 14-1 discloses a shared device) to the requested memory

element 14-1. Thus, George does not disclose all of the limitations of claim 21, and thus claim 21 is not anticipated by George. M.P.E.P. §2131.

- D. Claims 7, 14 and 22 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over George in view of Appellants' Background.

The Examiner has rejected claims 7, 14 and 22 under 35 U.S.C. §103(a) as being unpatentable over George in view of Appellants' Background. Office Action (11/15/2006), pages 9-10. Appellants respectfully traverse for at least the reasons stated below.

1. Examiner's motivation for modifying George to include the missing claim limitation of claims 7, 14 and 22 is insufficient to support a *prima facie* case of obviousness.

Most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that George does not teach "wherein said shared device is a Universal Serial Bus device" as recited in claim 7 and similarly in claims 14 and 22. Office Action (11/15/2006), page 10. The Examiner asserts that Appellants' Background teaches the above-cited claim limitation. *Id.* The Examiner's motivation for modifying George with Appellants' Background to include the above-cited claim limitation is "to be compatible with USB because this would provide an additional way to access the shared device." *Id.* The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 7, 14 and 22.

The Examiner has not provided a source for his motivation for modifying George to include the above-cited claim limitation. The Examiner simply states "to be compatible with USB because this would provide an additional way to access the shared device" as motivation for modifying George to include the above-cited claim limitation. The motivation to modify George must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Appellants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation². The Examiner has not provided any evidence that his motivation comes

² Appellants feel it is very important for the Examiner to point out the source of the Examiner's motivation because it appears to Appellants that the Examiner is relying upon his own subjective opinion. The reason why the Federal Circuit (*In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2000)) has required the Examiner to provide objective evidence is because it may be easy to conclude that it would be obvious to combine references using hindsight reasoning even though there is no motivation or suggestion to do so. One can usually find a reason to combine references or make modifications to the main reference. If that were all it took, then all inventions would be obvious and not patentable. For example, assuming that a wheelbarrow had never been developed and a patentee had claimed a wheelbarrow, if the main reference taught a cart with a shallow box body, and the secondary reference taught two wheels, then the Examiner could simply assert, using hindsight reasoning without providing objective evidence, that the motivation for combining the two references is so that the cart could be moved from place to place. Hence, the patentee could not obtain a patent on the wheelbarrow (even though one has never been developed) based on the Examiner's rationale for combining the references. Yet the Examiner has not provided any evidence that a person of ordinary skill in the art would have combined the references to make such a product. In hindsight, everything is obvious. It seems that a question that should be asked is why the invention (in this example a wheelbarrow) was not already developed. If it is so obvious, then it would seem it already would have been developed.

from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7, 14 and 22. *Id.*

Further, the Examiner' motivation ("to be compatible with USB because this would provide an additional way to access the shared device") does not provide reasons, as discussed further below, that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify George to include the above-indicated missing claim limitation of claims 7, 14 and 22. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7, 14 and 22. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

George addresses the problem of communicating data between multiple tasks through the use of a memory directive operative to monitor the status of a semaphore stored at a memory location provided by the requesting task. Column 1, lines 11-18; column 4, lines 35-55. The Examiner has not provided any reasons as to why one skilled in the art would modify George (which teaches communicating data between multiple tasks through the use of a memory directive operative to monitor the status of a semaphore stored at a memory location provided by the requesting task) to have its memory element 14-1 (Examiner asserts that memory element 14-1 teaches a shared device) be a Universal Serial Bus device (missing claim limitation). The Examiner's motivation ("to be compatible with USB because this would provide an additional way to access the shared device") does not provide such reasoning.

Why would the reason to modify George (whose purpose is to communicate data between multiple tasks through the use of a memory directive operative to monitor the status of a semaphore stored at a memory location provided by the

requesting task) to have its memory element 14-1 (Examiner asserts that memory element 14-1 teaches a shared device) be a Universal Serial Bus device (missing claim limitation) be to be compatible with USB because this would provide an additional way to access the shared device? George is not concerned with providing an additional way to access memory element 14-1. The Examiner cannot completely ignore the teachings of George in concluding it would have been obvious to modify George to include the missing claim limitation of claims 7, 14 and 22.³ Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify George to include the missing claim limitation of claims 7, 14 and 22. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7, 14 and 22. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

2. Proposed modification to George changes the principle of operation of George.

³ Appellants respectfully request Examiner Tang to respond to the following example. For example, suppose that the invention of a super soaker gun (essentially a plastic gun that shoots water) was never developed and an Applicant filed for a patent application on the super soaker gun. Applicant claims a plastic gun with a container of water that shoots water. The Examiner cites a primary reference that teaches a plastic gun that shoots darts and cites a secondary reference that teaches a plastic toy that contains a container of water. Since the primary reference does not teach a container filled with water, the Examiner cites the secondary reference as teaching this missing claim limitation. The secondary reference specifically states that the purpose of the container is to carry water. The Examiner then concludes that it would have been obvious to modify the primary reference with the secondary reference in order to carry water. The Examiner believes that he/she has established a *prima facie* case of obviousness since the Examiner has found a reason to have a container of water. However, the Examiner is completely ignoring the teaching of the primary reference. Why would one skilled in the art modify a plastic gun that shoots darts to have a container of water? This is the key question to answer. While having a container of water may be used to carry water, that is irrelevant as far as the purpose of the primary reference. Simply citing to a passage in the secondary reference that discusses the purpose of that secondary reference may not be sufficient evidence for an obviousness rejection. After all, surely there is a reason as to why the secondary reference teaches the missing claim limitation or else why would it include it? The Examiner must explain the connection between the teachings of the primary reference and the rationale of the secondary reference for including the missing claim limitation. Otherwise, everything can be deemed obvious and virtually nothing can be patented.

The Examiner admits that George does not teach "wherein said shared device is a Universal Serial Bus device" as recited in claim 7 and similarly in claims 14 and 22. Office Action (11/15/2006), page 10. The Examiner cites memory elements 14-1 through 14-N as disclosing shared devices. Office Action (11/15/2006), page 3. The Examiner modifies memory elements 14-1 through 14-N of George to be Universal Serial Bus devices by modifying George to include the limitation of claims 7, 14 and 22.

George addresses the problem of communicating data between multiple tasks through the use of a memory directive operative to monitor the status of a semaphore stored at a memory location provided by the requesting task. Column 1, lines 11-18; column 4, lines 35-55. George teaches a multiprocessor system 10 that includes a plurality N of processing elements (PE), indicated at 12-1 through 12-N, connected to a plurality M of memory elements (ME), indicated at 14-1 through 14-N through an interconnection network 16 as illustrated in Figure 1. Column 6, lines 32-37. George further teaches the internal structure of memory elements 14 in connection with Figure 3. Column 7, line 29 – column 8, line 51.

Universal Serial Bus (USB) may refer to a serial bus standard to interface devices. See <http://en.wikipedia.org/wiki/USB>.

By modifying memory elements 14-1 through 14-N (Examiner asserts that memory elements 14-1 disclose a shared device) to be Universal Bus devices, as proposed by the Examiner, processing elements 12-1 through 12-N would no longer communicate with memory elements 14-1 through 14-N in the same manner. In fact, George would no longer be able to communicate data between multiple tasks through the use of a memory directive operative to monitor the status of a semaphore stored at a memory location provided by the requesting task. Hence, the proposed modification to George will change its principle of operation (i.e., George would no longer be able to communicate data between multiple tasks through the use of a

memory directive operative to monitor the status of a semaphore stored at a memory location provided by the requesting task). As a result, there is no suggestion or motivation to make the proposed modification. *In re Ratti*, 270 F.2d 810, 813, 123 U.S.P.Q. 349, 352 (C.C.P.A. 1959). Accordingly, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 7, 14 and 22. M.P.E.P. §2143.

VIII. CONCLUSION


For the reasons noted above, the rejections of claims 1-22 are in error. Appellants respectfully request reversal of the rejections and allowance of claims 1-22.

Respectfully submitted,

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CLAIMS APPENDIX

1. A method for automatically switching remote shared devices in a dense server environment comprising the steps of:
 - receiving a request to access a shared device from a server blade; and
 - issuing a query as to whether said shared device is being accessed;
 - wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of:
 - receiving a response to said query indicating that said shared device is not available; and
 - waiting to receive a response that said shared device is available.
2. The method as recited in claim 1 further comprising the step of:
 - determining if said shared device is being accessed.
3. The method as recited in claim 2, wherein if said shared device is not being accessed then the method further comprises the steps of:
 - connecting said shared device with said server blade; and
 - transferring said request to access said shared device to said shared device.
4. The method as recited in claim 2, wherein if said shared device is being accessed then the method further comprises the step of:
 - determining if said shared device is being accessed by said server blade.
5. The method as recited in claim 4, wherein if said shared device is being accessed by said server blade then the method further comprises the steps of:
 - connecting said shared device with said server blade; and
 - transferring said request to access said shared device to said shared device.
6. The method as recited in claim 1 further comprising the steps of:

receiving said response that said shared device is available;
connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.

7. The method as recited in claim 1, wherein said shared device is a Universal Serial Bus device.

8. A computer program product embodied in a machine readable medium for automatically switching remote shared devices in a dense server environment comprising the programming steps of:

receiving a request to access a shared device from a server blade; and
issuing a query as to whether said shared device is being accessed;

wherein if said shared device is not being accessed by said server blade then the computer program product further comprises the programming steps of:

receiving a response to said query indicating that said shared device is not available; and

waiting to receive a response that said shared device is available.

9. The computer program product as recited in claim 8 further comprises the programming step of:

determining if said shared device is being accessed.

10. The method as recited in claim 9, wherein if said shared device is not being accessed then the computer program product further comprises the programming steps of:

connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.

11. The computer program product as recited in claim 9, wherein if said shared

device is being accessed then the computer program product further comprises the programming step of:

determining if said shared device is being accessed by said server blade.

12. The computer program product as recited in claim 9, wherein if said shared device is being accessed by said server blade then the computer program product further comprises the programming steps of:

connecting said shared device with said server blade; and

transferring said request to access said shared device to said shared device.

13. The computer program product as recited in claim 8 further comprises the programming steps of:

receiving said response that said shared device is available;

connecting said shared device with said server blade; and

transferring said request to access said shared device to said shared device.

14. The computer program product as recited in claim 8, wherein said shared device is a Universal Serial Bus device.

15. A system, comprising:

one or more shared devices; and

a plurality of server blades coupled to said one or more shared devices via a service unit, wherein said service unit is configured to establish a connection between one of said one or more shared devices and one of said plurality of server blades requesting to access said one of said one or more shared devices;

wherein said requesting server blade comprises:

a processor; and

a memory unit coupled to said processor, wherein said memory unit is operable for storing a program, wherein the program is operable for performing the

following programming steps:

receiving a request to access said requested shared device from said requesting server blade; and

issuing a query to said service unit as to whether said requested shared device is being accessed;

wherein if said requested shared device is not being accessed by said requesting server blade then the program is further operable for performing the following programming steps:

receiving a response to said query indicating that said requested shared device is not available; and

waiting to receive a response that said requested shared device is available.

16. The system as recited in claim 15, wherein said service unit comprises:

a processor; and

a memory unit coupled to said processor, wherein said memory unit is operable for storing a computer program, wherein the computer program is operable for performing the following programming step:

determining if said requested shared device is being accessed.

17. The system as recited in claim 16, wherein if said requested shared device is not being accessed then the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein if said requested shared device is not being accessed then the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shared device.

18. The system as recited in claim 16, wherein if said requested shared device is being accessed then the computer program of said service unit is further operable for performing the following programming step:

determining if said requested shared device is being accessed by said requesting server blade.

19. The system as recited in claim 18, wherein if said requested shared device is being accessed by said requesting server blade then the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein if said requested shared device is being accessed by said requesting server blade then the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shared device.

20. The system as recited in claim 15, wherein the program of said requesting server blade is further operable for performing the following programming step: receiving said response that said requested shared devices is available.

21. The system as recited in claim 20, wherein the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shard device.

22. The system as recited in claim 15, wherein said requested shared device is a Universal Serial Bus device.

EVIDENCE APPENDIX

No evidence was submitted pursuant to §§1.130, 1.131, or 1.132 of 37 C.F.R. or of any other evidence entered by the Examiner and relied upon by Appellants in the Appeal.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings to the current proceeding.

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